IN THE CLAIMS:

1-23. (Canceled)

24. (Currently Amended) A method of removing fruit from a plant during harvesting, comprising the steps of connecting drive means to the plant to apply vibrations thereto, wherein the vibrations have a time-variable frequency which can be controlled, and applying vibrations to the plant while sweeping the frequency of the vibrations linearly or non-linearly from an initial sweep frequency to a final sweep frequency so as to remove the fruit from the plant, the vibrations being applied during harvesting, the vibrations being controlled by complex time variable signal codes .

25. (Previously Presented) The method according to claim 24, wherein the vibrations are substantially unidirectional.

26. (Previously Presented) The method according to claim 24, wherein the vibrations are applied to the plant substantially normally to a longitudinal axis of the plant.

27. (Previously Presented) The method according to claim 24, including measuring acceleration or displacement of the vibrations using at least one sensor.

28. (Previously Presented) The method according to claim 27, further comprising the step of adjusting at least one of the frequency, phase and amplitude of the vibrations in dependence on sensor measurement.

29. (Previously Presented) The method according to claim 24, including manually adjusting at least one of the frequency, amplitude and phase of the vibrations.

30. (Canceled)

31. (Previously Presented) The method according to claim 24, wherein the initial sweep frequency is higher than the final sweep frequency.

32. (Previously Presented) The method according to claim 24, wherein the initial sweep frequency is lower than the final sweep frequency.

33. (Previously Presented) The method according to claim 24, wherein the vibrations include a modulation component which has a much lower frequency than the sweep frequency.

34. (Previously Presented) The method according to claim 24, further comprising the step of limiting the range of frequencies of the vibrations by means of a band pass filter.

35. (Previously Presented) The method according to claim 34, further comprising the step of omitting frequencies from the vibrations which cause leaf detachment from the tree.

36. (Previously Presented) A device for removing fruit from a plant comprising:

a vibratory head having means for clamping a fruit plant to apply vibrations to the plant, and means for controlling the vibratory head to vibrate at a time-varying frequency which sweeps linearly or non-linearly from an initial sweep frequency to a final sweep frequency,

the vibratory head further comprising at least one reaction mass which is vibratably driveable and connected to the clamping means for relative movement therebetween to provide a unidirectional force transmittable between the reaction mass and the clamping means, and hence transmittable to the plant, wherein the control means comprise electronic control means which also controls at least one of the amplitude and phase of the vibrations and supplies a complex time variable signal to control the vibratory head.

37. (Canceled)

38. (Previously Presented) The device according to claim 36, wherein the or each reaction mass comprises at least one of a hydraulic cylinder and piston.

39. (Previously Presented) The device according to claim 38, wherein the hydraulic piston and cylinder are driven by pressurised fluid which is selectively applied to chambers of the hydraulic cylinder by a valve.

40. (Previously Presented) The device according to claim 38, wherein the reaction mass comprises a piston.

41. (Previously Presented) The device according to claim 38, wherein the reaction mass comprises a cylinder.

42. (Previously Presented) The device according to claim 38, including two cylinders and two pistons.

43. (Previously Presented) The device according to claim 38, including more than two pistons and cylinders arranged orthogonally to one another for placement around a trunk or branch of the plant and driveable sequentially.

44. (Previously Presented) The device according to claim 36, wherein the vibrations of the or each reaction mass are substantially unidirectional.

45. (Previously Presented) The device according to claim 36, wherein the vibratory force is applied to the plant substantially normally to the longitudinal axis of the plant.

46. (Previously Presented) The device according to claim 36, further comprising sensors for measuring at least one of the acceleration, velocity, and displacement of the vibrations.

47. (Previously Presented) The device according to claim 46, wherein at least one of the frequency, phase and amplitude of the vibrations of the reaction mass are adjustable in dependence on the sensor information.

48. (Previously Presented) The device according to claim 36, wherein the control means are manually adjustable.

49. (Canceled)

50. (Previously Presented) The device according to claim 36, wherein the initial sweep frequency is higher than the final sweep frequency.

51. (Previously Presented) The device according to claim 36, wherein the initial sweep frequency is lower than the final sweep frequency.

52. (Previously Presented) The device according to claim 36, wherein the vibrations include a modulation component which has a much lower frequency than the sweep frequency.

53. (Previously Presented) The device according to claim 36, wherein the frequency range is limited by a band pass filter.

54. (Previously Presented) The device according to claim 36, wherein frequencies which cause leaf detachment from the tree are substantially omitted from the vibrations.

55. (Previously Presented) The device according to claim 38, wherein the vibratory head is mounted on carrying means with respect to which the vibratory head is independently movable.

56. (Previously Presented) The device according to claim 38, wherein the drive means utilises electromagnetic or pneumatic force to oscillate the reaction mass.

57. (Previously Presented) The method according to claim 24, wherein the vibrations further have at least one of a phase and an amplitude which varies with time.

58. (Cancel)

59. (Previously Presented) The method according to claim 24, wherein the vibrations are controlled by electronic control means.

60. (Previously Presented) The method according to claim 24, wherein the frequency of the vibrations exploits the pendulum-like non-linear resonance properties of the fruit-stem combination.

61. (Previously Presented) The method according to claim 28, wherein said adjusting step comprises one of reducing vibration amplitude and momentarily increasing rate of change of the vibration frequency of the driving motion.

62-63. (Canceled)

64. (Currently Amended) The device according to claim ~~36~~65, wherein the friction reducing means comprises Teflon® strips.

65. (Currently Amended) The device according to claim 36, wherein the reaction mass is slidably held in a cage of bars having friction reducing means.